REMARKS:

Reconsideration of the rejections is respectfully requested.

The status of the claims is as follows:

Amended:	1-3
Cancelled:	None
New:	9-15
Pending:	1-15

The claims have been amended to more clearly define the invention. Support for the amendments is either apparent, or is as described in the text below. Support for the claimed range of z can be found, for example, at paragraph 10. No new matter is added.

Concise Explanation of Foreign Text

The Office Action notes that no English text was provided with respect to EP 1,155,455. Enclosed with this response is a Supplemental Information Disclosure Statement listing US 6,513,949, which corresponds to EP 1,155,455. The '949 both provides an Abstract and provides an English language disclosure in the patent family.

35 U.S.C. §112, ¶1

The claims stand rejected based on an asserted discrepancy in the definition of "z." Applicant respectfully submits that the meaning under both noted reference formulas is the same. However, to facilitate prosecution, the reference from paragraphs 5 and 12 has been inserted into the claims.

Asserted Obviousness-Type Double Patenting - US Application 10/823,288

To facitilitate prosecution, enclosed is a Terminal Disclosure with respect to US Application 10/823,288.

Asserted Obviousness-Type Double Patenting - US 6,544,438

The claims are asserted to be obvious over claims 10-12 in US 6,544,438, thereby assertedly giving rise to obviousness-type double patenting. Applicant respectfully submits that the discussion below addressing this document with respect to rejections under 35 U.S.C. §§102 and 103 adequately addresses this rejection. In light of the discussion below, Applicant respectfully submits that this rejection should be withdrawn.

Claim Rejections - 35 U.S.C. §§102(e) and 103(a) - US 6,544,438

Claims 1-8 stood rejected based on an assertion of anticipation by or obviousness over US 6,544,438. US 6,544,438 teaches that the useful range of "z", or the part gallium sulfide is 0.005 to 0.07 (0.5% to 7%). Claims 1-8 only recite values outside this range. The '438 patent does not teach or suggest that useful phosphors would be obtained with the relatively high gallium sulfide amounts (z) claimed here. Applicants on the other hand have made the following phosphors with high z values, and found very good efficiency. The data indicates that the earlier estimation that 0.07 was the top of the useful range, was in error.

Sr/Ca Ratio	*z* value	Emission Peak, nm	Quantum Efficiency
0.1/0.9	7%	557	0.70
0.1/0.9	**11%**	**557**	**0.65**
0.7/0.3	6.5%	549	0.82
0.6/0.4	7%	546	0.75

Accordingly, Applicant respectfully submits that the rejection is in error and should be withdrawn.

Claim Rejections - 35 U.S.C. §§103(a) - US 6,773,629

Claims 1-8 stood rejected based on an assertion of anticipation by or obviousness over US 6,773,629. US 6,773,629 teaches that the ***method*** of making certain thiogallate, thioaluminate or thioindate phosphors should contain an excess of gallium, aluminum or indium

over available counterions, and that the product should include ***some*** corresponding sulfide (such as gallium sulfide). The amounts of thio-reactive metal (Ga, Al, In) in the formation process are such that – given an improbable ideal yield – the product would have 3-12.5% sulfide. But, for gallium at least, the ideal is made remote by the volatility of this metal. The amount of the metal the carries through the forming reactor to form sulfide can be small to none, or even result in a deficit of gallium at the completion of the forming reaction. For example, in Example 1 of the '629 patent, an amount of gallium to form 5% sulfide is used in the forming reaction, but the result is a "trace" of gallium sulfide. See 7:5-7. Figure 1 provides x-ray data on the Example 1 product that is believed to be consistent with a trace, or at least another amount clearly less than 5%.

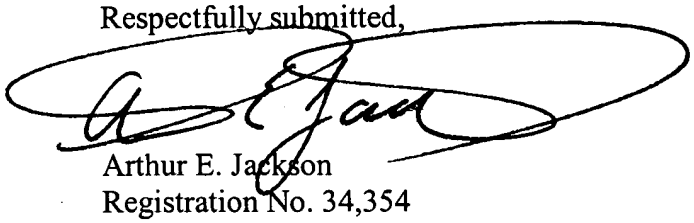
In the additional examples of the '629 patent, a range of process amounts of gallium were used in the forming reaction, but all that is said of the product is that adding more starting gallium (under the same forming conditions) provides more product sulfide. Nothing tells us how much is in the product. And, based on the disclosure, the forming cannot be replicated to determine the amount of sulfide. This is because gallium loss is dependent on the geometry of the forming oven – and this geometry is not described.[2] To anticipate, the product of the '629 patent would ***necessarily*** have to be in the range claimed here. Thus, the Applicant respectfully submits the assumptions underlying the rejection are in error. Accordingly, Applicant respectfully submits that the rejection should be withdrawn.

[2] A flash reactor is described with many options, and with reference to a trademark for such a device, but the flash reactor is only used to prepare sample for the forming reaction. This preparation is one more variable that may affect gallium sulfide recovery, and even this is not sufficiently described. But, moreover, the reactor itself is not described further than as a "sulphurizing furnace." See 6:64.

Conclusion

In light of these amendments and remarks, it is respectfully submitted that the Amendment should be entered, the rejections should be withdrawn, and that the application is in condition for allowance.[3]

Respectfully submitted,



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